

## M 5.4, 10 km NE of Tuban, Philippines

Origin Time: 2021-10-02 21:59:26 UTC (Sun 05:59:26 local)

Location: 12.8702° N 120.9053° E Depth: 8.8 km

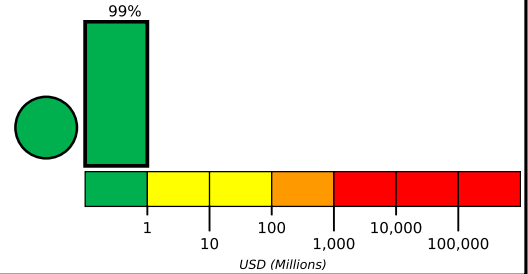
Created: 3 weeks, 0 days after earthquake

### Estimated Fatalities



Green alert for shaking-related fatalities and economic losses. There is a low likelihood of casualties and damage.

### Estimated Economic Losses

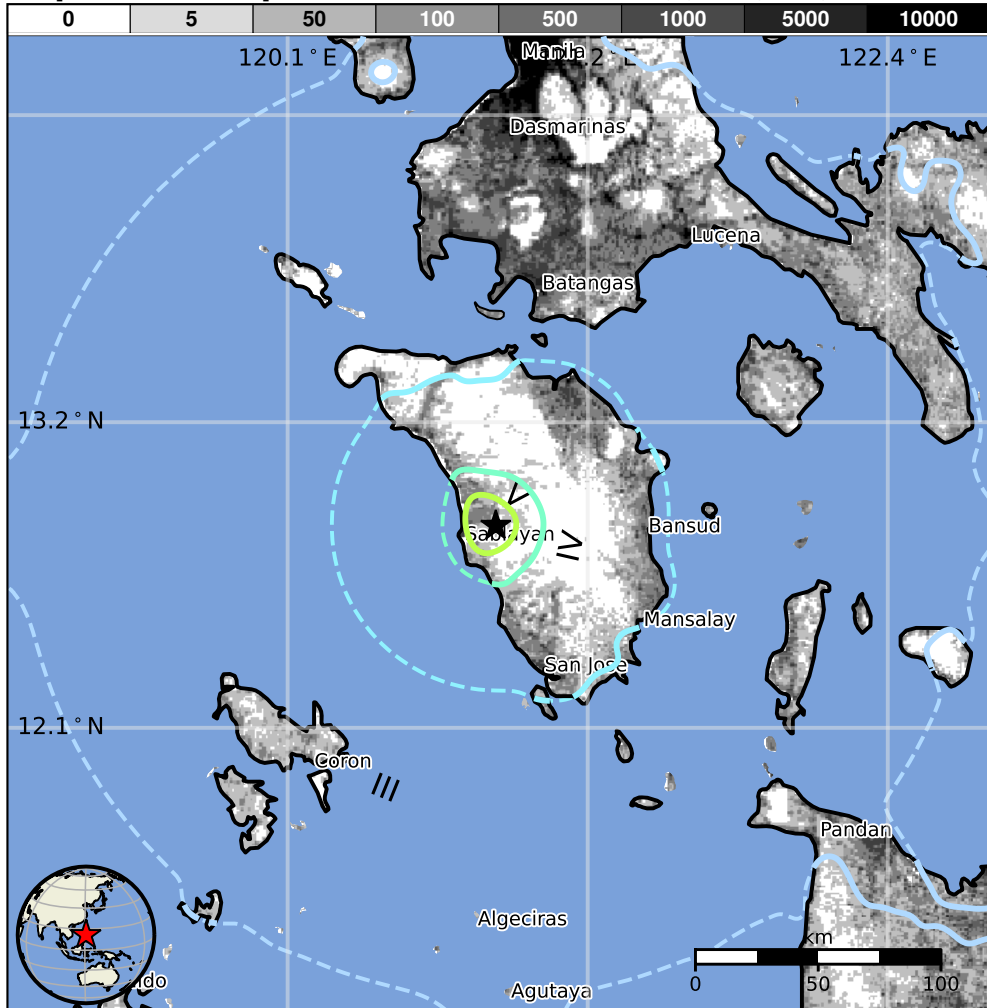


### Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)		—*	29,062k	1,295k	47k	63k	6k	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

\*Estimated exposure only includes population within the map area.

### Population Exposure



### Structures

Overall, the population in this region resides in structures that are a mix of vulnerable and earthquake resistant construction. The predominant vulnerable building types are unknown/miscellaneous types and heavy wood frame construction.

### Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1999-12-11	344	7.2	VIII(17k)	1
1973-03-17	212	7.5	VIII(6k)	15
1990-07-16	318	7.7	IX(893k)	2k

Recent earthquakes in this area have caused secondary hazards such as landslides and liquefaction that might have contributed to losses.

### Selected City Exposure

from GeoNames.org

MMI	City	Population
VI	Tuban	2k
VI	Sablayan	38k
V	Barahan	6k
V	Batasan	5k
V	Ligaya	8k
IV	Banos	2k
IV	Calapan	66k
III	Calamba	317k
III	Taguig	644k
III	Manila	1,600k
III	Quezon City	2,762k

PAGER content is automatically generated, and only considers losses due to structural damage.

Limitations of input data, shaking estimates, and loss models may add uncertainty.

<https://earthquake.usgs.gov/earthquakes/eventpage/us6000fr6u#pager>

bold cities appear on map.

(k = x1000)

Event ID: us6000fr6u